



BRIEF IN SUPPORT OF THE PETITION FOR CERTIORARI.

STATEMENT OF THE CASE.

I.

The Opinions of the Courts Below: The opinion of the Sixth Circuit Court of Appeals is reported at 148 Fed. (2) 267, and appears at Vol. VI, pages 2 to 16 of the record.

The Order withdrawing the decision of certain of the issues decided by the Court and which were not before the Court appears at Vol. VI, pages 57 and 58 of the record.

The opinion of the District Court is reported at 52 F. S. 317, and appears at Vol. II, pp. 1061-1066 of the record.

Findings of Fact and Conclusions of Law of the District Court appear at Vol. II, pp. 1066-1068 of the record.

II.

(1) The jurisdiction of this Honorable Court is invoked under Section 240 (a) of the Judicial Code as amended by the Acts of February 13, 1925; 28 U. S. Code, Section 347.

(2) The date of the Decree below is March 5, 1945 (Vol. VI, R. p. 2), Petition for Rehearing was filed March 24, 1945 (Vol. VI, R. p. 17) and denied by the Court of Appeals on April 13, 1945 (Vol. VI, R. p. 57).

(3) This suit is an equity suit arising under the patent laws of the United States and the Decree of the Circuit Court of Appeals for the Sixth Circuit requires that the Bill of Complaint in the suit be dismissed on the patent cause.

III.

The Issues Are:

- (1) Invention and mechanical skill and
- (2) Sufficiency of disclosure of the first patent in suit.

IV.

Foreword: Today, in the great American invention profession, in industry, and in the patent law profession, nobody knows "where they are at," to use a colloquial, but emphatic, expression; nobody in either profession or in business, big or little, knows whether "he is afoot or on horseback," to use another such expression. The Courts below are in the same dilemmas and confusion.* No inventor knows when his grant will be validated and no lawyer knows how to advise a client. Very naturally confusion on confusion results; of this confusion about the only thing certain is that there is a very rapid and dangerous decline in invention in the United States, as we will show by data and curves hereinafter. Consequently, exercise of supervisory authority is imperative not only to still this confusion, but to stay the decline in invention and the disaster, both in peace time industry and in the war weapons, that will result therefrom.** Proceedings in the instant cause illustrate this confusion and invite the application of the supervisory authority of this Court to achieve both these ends.

* This is further well illustrated by the dissenting opinion of Judge Parker of the Fourth Circuit, sitting on the Third Circuit Court of Appeals in *Triangle v. National Electric*, 65 USPQ 197. Since the complete change in the personnel of the Third Circuit Court of Appeals, no patents have been sustained against a fair average prior thereto. The Fourth Circuit Court of Appeals has, as is clearly shown by Judge Parker's opinion, continued the previous practice. (See for example *Lever vs. Procter*, 139 Fed. (2) 633.)

** President Roosevelt's Patent Planning Commission, headed by Mr. Kettering, reported that "The American patent system" (as it was adjudicated) "stimulated American inventors to originate a major portion of the important industrial and basic inventions of the past 150 years; * * * stimulated creation and development of products and processes necessary to arm the nation and to wage successful war; * * * operated to protect the individual and small business concerns during the formative period of a new enterprise."

Confusion in the Patent Law and the Patent Practice is illustrated by such comments as those ranging all the way from a declaration by the Third Circuit Court of Appeals in *Armstrong v. United Cork, supra*, that the "standard of invention" has been raised in such a way as to be illustrated by the moving back of a target on a rifle range. So radical is the change in the view of such Court that such Court found it necessary to console the large number of inventors, patentees, etc. whose patent grants were to and have been invalidated and who would suffer as a consequence of this alleged *ex post facto* raise in the standards of invention. On the other hand, the Court of Customs and Patent Appeals in the case of *In re Shortell, supra*, finds, several years afterwards, that there has been no such change in the standards of invention, declaring that it is not within the province of the Courts to establish new standards of invention, but that that is for Congress to rule upon (142 Fed. (2) 296). Some Courts say this Court has raised the standards; others say, no, this Court hasn't. In between these extreme views we find in the other Courts, the "sound and fury" over such proposals; the "flash of genius" theory has ranged all the way from an acceptance of that theory to a rejection thereof and a reliance upon the theory of Thomas A. Edison that invention is 98% perspiration and 2% inspiration.

Disastrous Consequences of This Confusion is illustrated by the following:

(A) Decline in Decision Favorable to the Patentee Almost to the Vanishing Point and to Where the Patent Grant Is No Longer an Incentive to Invent (all done *ex post facto* after the issue of the grant): In the Sixth Circuit Court of Appeals (which may be taken as—and we think is—typical) decisions favorable to the patentee declined from over 36% in favor of the patentee in 1900 to 1905 to

less than 4% in favor of the patentee in 1944 and 1945; the following periods and percentages show the record of that Court:

Sixth Circuit Court of Appeals Record on Patents:

1900-1905	36.3%
1929-1934	35.3%
1936-1941	17.6%
1942-1945 (up to date).....	11.66%
The year ending March 21, 1945....	3.84%

We say this is typical because in some of the Courts of Appeals the old standards are maintained, while in others, such as the Third and Fifth Circuit Courts of Appeals, this decline has developed into a massacre of the inventor as shown by the following corresponding table:

1929-1934	40.3%
1936-1941	17.2%
1942 to date	0%

The same is true in the Fifth Circuit Court of Appeals whose record is as follows:

1929-1934	18.5%
1936-1941	0%

For the Ten Circuit Courts of Appeals the average record was as follows:

1929-1934	28.36%
1936-1941	17.49%

These tables are based on decisions reported in the Federal Reporter.

It is significant that most of the patents issued in 1900 and 1905 were issued by Examiners appointed under the "Spoils System" ("to the victor belongs the spoils," i.e., the Government jobs); these appointees had little or no knowledge of science and mechanics, whereas the patents before the Courts and ruled upon in 1936 to 1945 were issued by Patent Office Examiners who were graduates of technical schools and passed a rigorous Civil Service ex-

Fig. 1



Fig. 2
INVENTION INDEX 1950-1955



be seen that the trend of the Invention Index is generally upward, while the trend of the Patent Index is generally downward. This indicates that the number of inventions is increasing, while the number of patents is decreasing. This may be due to the fact that the number of inventions is increasing, while the number of patents is decreasing. This may be due to the fact that the number of inventions is increasing, while the number of patents is decreasing.

FIG. 1

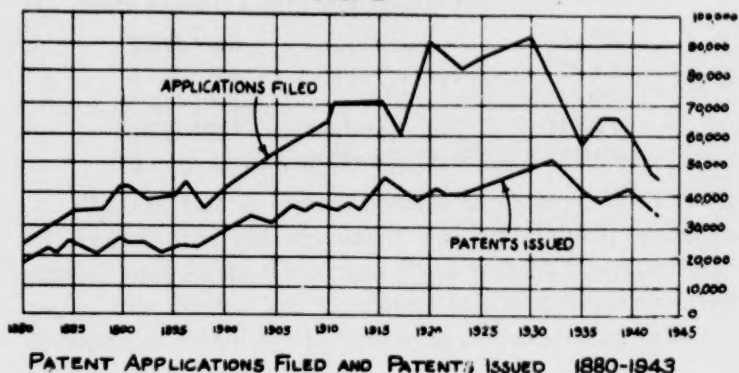
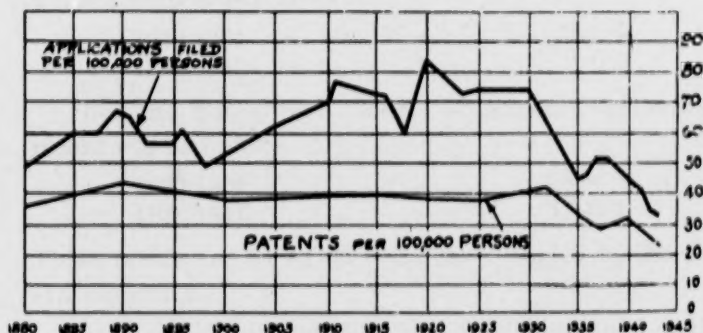


FIG. 2
INVENTION INDEX 1880-1943



IN 1880 INVENTION PER CAPITA WAS 36 PATENTS PER 100,000 PERSONS; IN 1930 IT WAS 41 PATENTS PER 100,000 PERSONS, SHOWING RATE SUBSTANTIALLY CONSTANT AND DISPROVING CLAIM THAT PATENT OFFICE HAD BECOME PATENT FACTORY. THERE WAS BETWEEN 1933 AND 1943 A DECLINE OF 41% PERCAPITA IN PATENTS. BETWEEN 1930 AND 1943 THERE WAS A DECLINE OF 54% PER CAPITA IN PATENT APPLICATIONS.

THE DATA IS FROM THE RECORDS OF THE PATENT OFFICE WHERE SUBSTANTIALLY ALL INVENTIONS ARE PATENTED.

amination relating to scientific and mechanical subjects. Therefore the higher the qualifications of the Examiners the fewer the patents sustained.

We are not contending that the decline is due to the members of the Courts, but to the confusion to which we have called attention.

(B) Decline of $41\frac{1}{2}\%$ in Per Capita Issue of Patents occurred in the United States between 1933 and 1943, as shown by the lower curve in Fig. 2 on the opposite page. This curve shows the per capita issue of patents yearly in the United States from 1880 to 1943. More specifically it shows the number of patents issued per 100,000 persons. The number of patents issued per 100,000 persons was substantially constant during this 53 years, running from 36 to 41 patents per 100,000 population. However after the beginning of the confusion to which we refer the number per capita dropped off $41\frac{1}{2}\%$ in ten years as shown by the curve.

The bottom curve in Fig. 1 shows the actual number of patents issued without regard to the population and constitutes a check on the per capita curve shown at the bottom in Fig. 2. An examination of these curves will show that the decline in the last decade was not due to depressions, to wars, to a change in attitude in the Patent Office, or to any other cause than the confusion and uncertainty and the decline in favorable adjudications of patents to which we have referred. Prior depressions, such as the 1893 depression, the 1907 depression and the 1921 depression had no effect upon the curve or the per capita issue of patents. Neither the Spanish-American War nor World War I had any effect upon either. The decline began long before the present war and continued through what is known as the "Roosevelt Prosperity." The top curve in each Fig. 1 and Fig. 2 shows the corresponding record of applications filed in the United States Patent Office and the decline in each corresponding to the recent decline in

patents shows that there was no change in the policy of the Patent Office and that the decline was due to causes outside of the Patent Office.

(C) There was a decline of 54% in the filing of applications for United States patents in the Patent Office from 1930 to 1943 on a per capita basis. This is shown in the top curve in Fig. 2. It also is checked by the top curve in Fig. 1 which shows the actual applications filed without regard to the change in population. These curves are also independent of depressions, wars, changes in policies in the Patent Office, or any other cause, except the confusion to which we have referred and the decline in adjudications favorable to patents resulting from this confusion. Both during World War I and the Spanish-American War there was an increase in the actual filing of patent applications and an increase per capita. Likewise it will be found that previous depressions had no effect upon these curves. There was little or no change during the 1893 depression, whereas there was an increase during the 1907 depression, and a slight decrease during the 1921 depression. Although the decline began in 1930, during what has been called the "Hoover Depression," it continued during the so-called "Roosevelt Prosperity" and through the prosperity resulting from World War II.

We might say that the information disclosed by this data and these curves has been circulated, has received much comment, including magazine articles and newspaper editorials in the United States, has caused much alarm and, though inviting explanations, none have been advanced which explain the curves and the data except that the falling off is due to the confusion, the hostility towards the patentee, and the increase in unfavorable adjudications.

The issue, therefore, we think, boils down to this:

Do the American people want invention to continue or not?

The decisions in the cause at bar are typical of the changes in policy which have resulted in these disastrous declines.

(D) Substantial Decline in Invention in the United States is Conclusively Established by these Records. True enough, the decline in invention may not be absolutely parallel either to the decline in patents issued or applications filed, but that both establish a substantial and dangerous decline in invention cannot be disputed. That the decline is due to causes outside of the Patent Office is clear from the decline in the applications filed. In other words, in the thirteen years between 1930 and 1943 the 54% decline in the filing of applications per capita resulted from forces and influences outside of the Patent Office.

True enough, some of the decline may be due to driving inventions "underground" and to secrecy, but that is just as disastrous as discouraging invention altogether. These causes could account for only a small part of the decline.

It will be remembered that one of the purposes of the patent grant was to prevent inventions from going "underground" and being kept secret (*Patterson v. Kentucky*, 97 U. S. 501, 507). It will also be remembered that that was one of the advantages of the patent law, as was quoted from the Supreme Court of Ohio by this Court through Mr. Justice Harlan (*Patterson v. Kentucky, supra*) in defining the conditions prior to the patent statutes:

"The ingenious man was, therefore, led either to abandon pursuits of this nature, or to conceal his results from the world. The end of the statute was to encourage useful inventions, and to hold forth, as inducements to the inventor, the exclusive use of his invention."

To common knowledge there has been a substantial return to this scheme of abandoning pursuits which would result

in invention beneficial to the public or of keeping inventions secret where possible, since these doctrinal trends adverse to the inventor and including the so-called raising of the standard of invention by some of the Courts have become current.

It is difficult to criticize the inventor of a process for resorting to secrecy and going "underground" with his process under the conditions shown by the data we have submitted for such an inventor would certainly lose his patent grant to an infringer in the Third Circuit under the currently existing attitudes and trends there as shown in the table at page 12 of this Brief. Hence, the only results of such inventor disclosing his invention in a patent would be to equip "commercial pirates" to appropriate it and subject the inventor to expensive and futile litigation.

Suppose, for example, one were to spend a large sum of money and much effort which resulted in the invention of a process for extracting aluminum from clay where it exists in abundance or to successfully extract iron from the low grade ores as we exhaust the high grade ores during the current war—would such an inventor or any one else be induced either to make such an invention or to disclose such process when with certainty one who appropriated it in the Third Circuit or the Fifth Circuit would escape with the appropriated goods? Certainly not! Yet, one of the major purposes of the patent laws and the intent of Congress was to induce inventors to disclose their inventions.

The common sense view and the inevitable conclusion is that the inventor is human, never did work for nothing, and will not work, if his grant is going to be consistently repudiated, any more than a Government employee would continue to work if his pay checks were consistently repudiated.

(E) History Affirms These Conclusions, if one needs any affirmance of the truism that people will not work if their pay checks are consistently repudiated. Since invention covers the whole range of history and almost the entire range of human activities, we will deal with the affirming history briefly here; it is divisible into four periods, as follows:

(1) The period in which there was no offer and no reward. There were very few inventions during this period—perhaps one in a century—notwithstanding efforts were made to encourage invention by other schemes, including those similar to the presently proposed Kilgore Bill scheme all of which failed.

(2) From the beginning of the 17th Century to the beginning of the 19th Century when there were patent laws, but these laws were so poorly administered that the grant was almost as consistently repudiated as currently.

(3) Beginning in the forepart of the 19th Century and running down to the forepart of the 20th Century when there was a fairer administration of the patent laws than had ever been known before. This resulted largely from the influence of Benjamin Franklin and Thomas Jefferson who were themselves inventors, and from the broad view taken by Chief Justice Marshall and his associates and reflected in such cases as *Grant v. Raymond*, 6 Peters 218, 241-243. As every living man knows, this was the golden age of inventions and more progress was made in this period of history than all the rest of human history.*

* We think this history has justified the following from Francis Bacon:

“The introduction of great inventions appears one of the most distinguished of human actions, and the ancients so considered it for they assigned divine honors to the authors of inventions, but only heroic honors to those who displayed civil merit such as the founders of cities and empires, legislators, the deliverers of their country from lasting misfortunes, the quellers of tyrants, and the like. And if any one rightly

(Continued on next page.)

(4) The current period reflected in the declining parts of the curves shown in Figs. 1 and 2 of this brief and the data submitted on page 12, showing, *inter alia*, the fortunes of the patentee in the typical Sixth Circuit Court of Appeals, and which together show that we have returned, as far as the administration of the patent law is concerned, to the situation existing during the 17th and 18th Centuries and that we are rapidly approaching the results of the few inventions made then. All of this, of course, is checked by the fact that the character of the administration of the patent law occurring in the 17th and 18th Centuries generally continued during the 19th and the early part of the 20th Centuries in such countries as Mexico, India, Spain and generally throughout the world, except the United States and Western Europe, with the result that no more inventions were made in those countries during the 19th and the early part of the 20th Centuries than were made prior thereto; in other words, the only countries in which numerous inventions were made were in the countries where there was a fair administration of a patent law and such inventions were made only in the periods of time in which there was a fair administration of a patent law.

Now the purpose of the patent laws was to increase invention; as now administered it is having the reverse effect and decreasing invention as we have proved.

We will now proceed to show that the case at bar is not only typical, but illustrative, of this change in policy from the third period to the fourth period.

(Continued from preceding page.)

compare them, he will find the judgment of antiquity to be correct; for the benefits derived from inventions may extend to mankind in general, but civil benefits to particular lands alone; the latter, moreover, last but for a time, the former forever. Civil reformation seldom is carried on without violence and confusion, while inventions are a blessing and a benefit without injuring or afflicting any."

THE CAUSE AT BAR AND ITS FORTUNES BELOW.

(1) **The Tribunals Below:** We recognize our duty to accept with sincerity and a contrite heart the integrity, the high character, the ability, the earnestness, and the sound learning in the law of the Judges in the Courts below; all this we do quite independently of any duty in the premises, but we wonder if our duty as members of the Bar require us to pay the same tribute and hold the same regard for the knowledge of these Judges in the sciences of chemistry, physics, combustion engineering, etc. involved in this present suit. We remember that forty years after General Fitzhugh Lee left West Point he said: "I studied chemistry for four years at West Point, but all I remember about it is H_2S and an awful smell." We wonder if the Judges below would claim to remember more. We suspect some of them would limit their claims to the "awful smell." Hence, we discuss first the fortunes of the applications for the patents in suit before the Patent Office Tribunals who were, and are, not only learned, but skilled in these sciences.

(a) **The Patent Office Tribunals:** Everyone familiar with the history of the Patent Office knows that beginning about the turn of the Century, only Examiners who passed a rigorous examination in science were accepted and installed in the Patent Office Examining Corps. So rigorous were these examinations that nearly everyone who passed the examination was a graduate from some technical school in some branch of engineering. Graduates of the Massachusetts Institute of Technology, of Cornell University, of Case School of Applied Science, and of other well known scientific schools were from then on commonly found upon the Examining Corps in the Patent Office until now it is rare to find any other. These Examiners were assigned in the Patent Office in the branches of the science in which they were especially skilled and educated. Those who were graduates in electrical engineering were assigned to

the electrical division, etc. The Examiners who considered the applications of the patents in suit and allowed the patents in suit were such men. There is a well established rule that a Government employee is presumed to have done his duty (*Texas v. U. S.*, 10 F. S. 198; *U. S. v. Marks*, 32 F. S. 459) which attaches in the premises. Moreover, in recent years it has been common to accept the conclusions of Boards, Commissions, etc. appointed to deal with particular subject-matter and to require their findings to be accepted as the findings of specialists by reviewing Courts whose scope of review covers the whole field of human controversies and, therefore, makes them generalists. That policy is particularly appropriate in connection with the work of the Patent Office Examiners and is reflected in such comments as are found in this Court's decisions in *Radio v. Radio*, 293 U. S. 1 and *Mumm v. Decker*, 301 U. S. 168, 171.

We recognize that these rules may be weakened where better or even where new prior art is presented in a patent cause which was not before the Patent Office. In the instant cause, however, the art selected by the defendant's expert, as well as the plaintiff's expert as most pertinent (R. pp. 604-606, 806), was before the Patent Office Examiners and not only thoroughly discussed, but thoroughly considered by them (Vol. IV, pp. 485, 547, 573, 589, and 621); the record shows, moreover, that all of the art relied upon in the Courts below was before the Examiner who allowed the patents in suit (R. pp. 644-645, 771; Vol. III, pp. 407-422), except a couple of "ragtag and bob-tail" items admittedly less important than the art before the Patent Office.

We also recognize the contention that the Patent Office Tribunals considered the questions before them *ex parte*. The futility of this contention, particularly in the instant cause, is manifested and emphasized by the fact that the salient issues were before the Patent Office in Patent Office Interferences (Vol. IV, pp. 1011-1053) and, therefore, in *inter partes* proceedings and, further, by the fact that the

principal challenge of the defendant in the instant cause to the conclusions of the Patent Office Tribunals was through a professional patent expert who was very little experienced, and not at all skilled, in the arts and sciences to which the patents in suit relate. The "qualifications" which he advanced show that he was far less learned and skilled than the Patent Office Examiners in those sciences.

(b) The District Court: We have the highest regard for the judicial and legal accomplishments of Judge Wilkin, but we doubt if he would claim to remember any more about chemistry and the other sciences involved than General Fitzhugh Lee did. Moreover, it must be remembered that he was beholden to the Court of Appeals whose record of adjudications is reported on page 12 of this brief, and whose opinions favorable to patents have declined to less than 5%. We think Judge Wilkin's findings clearly show that he thought invention was present, and his decision would have been for the patentees except for these influences.

Invention and Mechanical Skill: Judge Wilkin found the evidence upon which the Patent Office issued the patents to be supported by the objective tests and reported some of them in his opinion. Many others were established by the proof. Thus Judge Wilkin said (Vol. II, pp. 1063-1064):

"The evidence convinces the Court that there was *a problem*, that the plaintiff made *a great contribution* to the solution of the problem, and an improvement in oil burners that was *accepted by the public and had commercial success*. The defendant itself took a temporary license."

The record shows that this was a condensed statement of the proofs showing the presence here of all of the "objective tests" which President Roosevelt's Patent Planning

Commission recommended be made controlling on the question of invention, and which this Court has always found controlling in its decisions, ancient, intermediate and current, as noted in the quotations in the footnote below.* The evidence showed that the problem solved by the inventors of the patents in suit had long been in existence, that there were many prior efforts and failures by those skilled in the art, including the defendant's engineers, had been

* In *Goodyear v. Ray-O-Vac*, 321 U. S. 275, this Court said:

"During a period of half a century, in which the use of flash light batteries increased enormously, and the manufacturers of flash light cells were conscious of the defects in them, no one devised a method of curing such defects. Once the method was discovered it commended itself to the public as evidenced by marked commercial success. These factors were entitled to weight in determining whether the improvement amounted to invention and should, in a close case, tip the scales in favor of patentability."

In *Smith v. Snow*, 294 U. S. 1, this Court said (p. 14):

"If the matter were doubtful, it is plain from what has been said that the character of the patent and its commercial and practical success are such as to entitle the inventor to broad claims and to a liberal construction of those which he has made."

In *Expanded Metals v. Bradford*, 214 U. S. 366, 381, this Court said:

"It may be safely said that if those skilled in the mechanical arts are working in a given field and have failed after repeated efforts to discover a certain new and useful improvement, that he who first makes the discovery has done more than make the obvious improvement which would suggest itself to a mechanic skilled in the art, and is entitled to protection as an inventor."

The doctrine is neither new to nor esoteric to the patent law. On the other hand it stems from and is bottomed on the fundamental philosophy of the general law as expressed by Mr. Justice Holmes, as follows:

"The life of the law has not been logic; it has been experience."
and

"A page of history is worth a volume of logic."

made and had failed* (Vol. I, pp. 211-212; 239-242; Exs. 47, 48; 53A-53L, 54, 55, & 56), that so general was the failure that the inventors found such skepticism when the public was apprized of their success that no one would accept representations and protestations of success or adopt the inventions without first testing them out (R. pp. 96-98, 111, 217, 227, 228, 238, 944, 951). Even after success was established by test, these skeptics required the posting of bonds guaranteeing continued successful performance. General public adoption, commercial success and duplication by defendant followed (Vol. I, pp. 106, 125, 240-241; Ex. 40).

The District Court also found that a new mode of operation was present. The furnace was demonstrated to him, and he said (Vol. II, p. 740):

“I have seen it” (i.e. the new mode of operation), “if you want to leave it to me, I know what I have seen.”
(See also Vol. II, pp. 711, 722, 739-740.)

This was a new mode of operation by which the thin sheet steel member was protected from oxidization by the neutral atmosphere created through maintaining by chemical actions a carbon monoxide flame behind the thin steel member which is illustrated in Fig. 4 hereof [Report Fig. 4 of Main Brief]. “Protection from oxidation” is not to be confused with “heat resistance,” as Judge Allen unfortunately did (Circuit Court of Appeals opinion, p. 6).

Although the District Judge did not itemize the “great contribution” which he found was made by the patentees into its constituents, this protection of the then steel rim through the chemically carbon monoxide neutral-

* In decisions, ancient, intermediate and current, this Court has yielded the question of “beyond the skill of the mechanic” to history which proved that mechanics had tried and failed. (*Keystone v. Adams*, 151 U. S. 319, 144-145; *Potts v. Creager*, 155 U. S. 597, 608; *Expanded Metals v. Bradford*, 214 U. S. 366, 381; *Paramount v. Tri-Ergon*, 294 U. S. 464, 474; *Goodyear v. Ray-O-Vac*, 321 U. S. 275.)

ized atmosphere was included among the numerous advantages making up this great contribution; some others were quick heating and cooling, increase in efficiency, durability, reduction of carbon deposits, avoidance of cracking, ability to burn heavier and cheaper oils, reduction in servicing, and reduction, if not elimination, of explosions in the furnaces.

The District Court could not find the patented combinations in the prior art, but found it necessary to resort to numerous prior art devices to select elements from here and there in this prior art. This is shown in Finding No. 8 (Vol. II, p. 1067), which is as follows:

“8. Some of the features of the claimed inventions are disclosed in the Heath patent, some in the Bird patent, some in the Kolva patent, some in the Braun patent, some in Exhibit DXM, and some in Exhibit DXN, and were to the extent of such disclosure anticipated by such patents.”

and also from the following statement in the Court’s opinion (Vol. II, p. 1065):

“True, as plaintiff says, ‘there has been a change in the shape and in the size and dimensions * * * and differences in the relation to each other of the parts.’”

These were the ultimate conclusions and findings on this subject, and other comments made in the interest of brevity as to the differences must be read in the light of these quoted statements.

To invalidate a patent by selecting features from here and there in the prior art where that patent has met the objective tests and made a “great contribution” is contrary to the decisions of this Court, ancient, intermediate and current, as shown by the quotations in the footnote below.*

* In *Smith v. Goodyear*, 93 U. S. 486, this Court said (496-497):

“But where there is some such new and useful result, where a machine has acquired new functions and useful properties, it

Sufficiency of Disclosure: It must be remembered that the specifications of the three patents in suit were not only reviewed by one or more Patent Office Examiners who were learned and skilled in the subject-matter to which they relate, but they were prepared by solicitors and reviewed by the inventors who were also skilled in these arts and sciences. Therefore, to accept a conclusion that the descriptions in all three of them are indefinite and do not teach the inventions to those skilled in the art made by Judge Wilkin would be almost like accepting such a conclusion by General Fitzhugh Lee against contrary conclusions by chemists, physicists, and combustion engineers. There is no evidence in the record to support a conclusion that the specifications of all of these patents are thus indefinite. No one skilled in the art testified that they were indefinite. The furtive comments made by defendant's professional expert on this subject not only did not come from one skilled in the art, but even if construed as claiming that the disclosures were indefinite, such comments are entirely inconsistent with this expert's remarks that prior art patents, which were admittedly more meager in their disclosure, were sufficient. This latter conclusion alone shows the error of the District Judge in the premises.

Manifestly, we cannot reach the truth regarding facts by accepting the conclusions relating to science, physics,

may be patentable as an invention, though the only change made in the machine has been supplanting one of its materials by another. This is true of all combinations, whether they be of materials or processes."

In *Expanded Metal v. Bradford*, 214 U. S. 366, this Court said (p. 381):

"It is perfectly well settled that a new combination of elements, old in themselves, but which produce a new and useful result, entitles the inventor to the protection of a patent. *Loom Company v. Higgins*, 105 U. S. 580-591."

In *Goodyear v. Ray-O-Vac*, 321 U. S. 275, this Court said:

"Viewed after the event, the means Anthony adopted seem simple and such as should have been obvious to those who worked in the field, but this is not enough to negative invention."

combustion engineering, etc. made by the General Fitzhugh Lees against those made by chemists, physicists, combustion engineers and other scientists, such as the Patent Office Examiners, the inventors and their solicitors. If it is the truth we seek, there is only one choice and only one answer.

There is not a Justice on this Court who would accept an opinion of General Fitzhugh Lee, Judge Wilkin, Judge Allen, or any other lawyer, no matter how good a lawyer he or she was, which opinion was contrary to that of a chemist on a chemical question, or a medical specialist on a diagnosis in his specialty. Then why are we forced to accept conclusions of good lawyers (but at least mediocre chemists) overruling the conclusion of the Patent Office Examiners whom our Government has selected through extensive and rigorous Civil Service Examinations as specialists and experts in chemistry and the sciences and arts on questions where the evidence is the same? We would not do it if these men were members of many of the recently established boards and Commissions dealing with less involved and abstruse subjects. We would make but one choice if we were seeking advice for conducting chemical warfare, or any type of warfare to which the inventions relate. To show how far we have been led afield it is a fact that these good lawyers sustained more patents issued by those appointed as Patent Office Examiners for political reasons prior to 1900 than by the graduates of Massachusetts Institute of Technology and other technical schools currently serving as Examiners.

It is, therefore, plain that the District Court was hard put to it to render a decision which would insure his maintaining his allegiance due a Court of Appeals which was deciding 95% of its patent causes against the patentee. A fair reading of the opinion and findings of the District Court leads to two conclusions:

(1) the patents are valid on the fact findings of the District Court when applied to the established law and the decisions of this Court, ancient, intermediate and current, as late as 321 U. S., and

(2) the commendable deference of the District Judge to the practice of the Court of Appeals as shown in the table, *supra* (p. 12).

(c) **The Opinion of the Court of Appeals** was written by Judge Florence Allen. On Petition for Rehearing only the errors in the opinion which related to procedure were corrected. Judge Allen corrected the opinion to eliminate the Court's decision of issues which were not before the Court, as we have pointed out (Vol. VI, pp. 57-58). The opinion differed from the opinion of the District Court in holding indefiniteness of disclosure only in the first patent in suit and in ignoring the salient Findings of Fact of the District Court, as we understand Judge Allen's opinion. It, of course, differs from the Patent Office in holding insufficiency of disclosure in the first patent in suit and lack of invention in each of the patents in suit on the same art that was before the Patent Office.

"Insufficiency of Disclosure" in the First Patent: Judge Allen's finding of insufficiency of disclosure in this patent relating to chemistry, physics, combustion engineering, and like arts, is bottomed upon (1) an error of law that a party is required to show dimensions in his patent and (2) an error of fact that such dimensions are not shown in the patent.

The error of law is not only contrary to decisions of this Court that a patentee need not give dimensions (*Mineral Separations v. Hyde*, 242 U. S. 261, 271 and cases cited therein),* but it is emphasized by the fact that none of the

* "The composition of ores varies infinitely, each one presenting its special problem, and it is obviously impossible to

(Continued on next page.)

prior art which is relied upon to invalidate the patent gave any dimensions. The rule is well established that the requirements for the patentee are the same as those for the prior art, and the Courts do not say (except in this cause) in one breath that a disclosure in the prior art which does not show dimensions is sufficient to teach those skilled in the art, whereas a disclosure of a patent in suit which does not give dimensions is insufficient to teach those skilled in the art. Not only by common sense, but by an abundance of authority has it been held that the Courts would not say in one breath that a particular kind of disclosure in a patent was sufficient, and in the next breath that it was not.*

However, it did happen that the first patent in suit was the only patent before the Court which did give such dimensions that the dimensions of all the parts could be found by the mere use of a ruler. To require a patentee to give all the dimensions in his patent would make patent specifications endless, and would place an entirely unnecessary burden upon the patentee because those skilled in the art are capable of arriving at the dimensions, as this and other Courts have said in their opinions. Moreover, dimensions differ with sizes and often with equivalents and other factors.

(Continued from preceding page.)

specify in a patent the precise treatment which would be most successful and economical in each case. The process is one for dealing with a large class of substances and the range of treatment within the terms of the claims, while leaving something to the skill of persons applying the invention, is clearly sufficiently definite to guide those skilled in the art to its successful application, as the evidence abundantly shows. This satisfies the law. *Mowry v. Whitney*, 14 Wall. 620; *Ives v. Hamilton*, 92 U. S. 426, and *Carnegie Steel Co. v. Cambria Iron Co.*, 185 U. S. 403, 436, 437."

* *Caewood Case*, 94 U. S. 695, 704; *Seymour v. Osborne*, 11 Wallace, 516, 555; *Downton v. Yeager*, 108 U. S. 466; *Eames v. Andrews*, 122 U. S. 40, 66; *Walker on Patents*, Deller Edition, pp. 270-272.

However, as we say, the first patent in suit gave certain dimensions as was admitted and, furthermore, these dimensions came within the limits prescribed by the experts and, therefore, complied with the strictest imaginable requirements. It was contended that the patentee did not give the dimension of the flame rim. It was, however, pointed out that in his specification he gave dimensions of other parts from which the dimension of the rim could be determined by the mere use, even by a layman, of a ruler, from which the dimension of the rim could be determined, so that if it were the law that an inventor was required to give dimensions of any part of his combination then admittedly a rim having the following minimum and maximum thicknesses is sufficient:

Minimum—.025" (Vol. VI, p. 5).

Maximum—.375" to .500" ("three-eighths of one half inch") (Vol. VI, p. 5).

Also, admittedly, the patent specification discloses the following thicknesses of rim to anybody who has the discretion to use a ruler:

.091 (Vol. VI, p. 5).

.100 (four times the thickness of .025, testified to by Mr. Powers).

.175 (seven times the preferred thickness of .025, testified to by Mr. Powers) (both recognized at the center of p. 4 of the official opinion).

Now, each of these disclosed thicknesses of .091, .100, and .175 is between the minimum of .025 and the maximum of .375 or .500. Consequently, if the rim is made .091, .100 or .175 inches in thickness, it is, by this proof, a rim which when employed in the combination disclosed would result in a structure which would be operative, useful, perform the functions of the invention and operate in accordance with the invention.

Perhaps no change of policy could be so fatal to the patent grant, and so discouraging to invention, as a change

of standard on the sufficiency of disclosure from the present and current one into one requiring the giving of dimensions in a patent, because in view of the practice established by the rule reaffirmed by this Court in *Mineral Separations v. Hyde*, *supra*, no inventor has given dimensions in his patent except by mere chance, as is the case of the first patent here in suit. Ninety-nine existing patents out of one hundred would be invalid if such were the rule, and ninety-nine out of one hundred opinions holding patents valid in the past would be erroneous. Apparently the Sixth Circuit Court of Appeals has changed, or is trending to a change, of this standard as reflected not only in the decision in this cause, but in such decisions as *Wolverine v. Detroit Gasket*, 65 U. S. P. Q. 208-209 (decided April 10, 1945, opinion by Judge Allen); *Libby-Owens v. Celanese*, 135 Fed. (2) 138 (C. C. A. 6). If we wished to stop invention in the United States we could hardly adopt a more effective rule.

The Court of Appeals in Considering Non-Invention

either differed with, or ignored, the fact findings of the District Court that the patentees had made a "great contribution to the solution of the problem" and which was "accepted" by the public, thereby establishing a finding by the District Court of a "disclosure of advances in knowledge which will be" (and here is) "beneficial to society," to quote this Court in *Sinclair v. Interchemical*, decided May 21, 1945. Judge Allen, who wrote the opinion of the Court of Appeals, concluded that the contribution made in the first patent in suit was the use of "plain steel" or "ordinary steel" in the rims of the furnace (Vol. VI, p. 9). No claim was ever made by either party and no finding was made by the District Court that this was the contribution or was even one of the contributions. Some evidence was put in on the subject merely to show that the invention was not limited to any particular kind of steel, but covered

a wide range of different kinds of steel, having different properties and, therefore, not limited to a particular kind of material since different steels are of very different materials, although they are often designated by the same name. There is a partial itemized list of the specific items which constituted the "great contribution" found by the District Court at page 3 of this brief. Indeed, all of the fact findings upon which the Court of Appeals based its conclusions were at variance with the facts upon which the District Court based its conclusions, which we have stated and quoted, *supra* (pp. 3 & 21-24). This includes the finding that the Bird patent constitutes an anticipation. The District Court found that it did no more than contribute one of the features to which there was added features from five to nine other prior devices; one providing a feature here and another a feature there which had to be united to build up anticipation in some way nobody has as yet explained, notwithstanding all our entreaties that somebody do so.

Finally the Court of Appeals ignored the finding of the District Judge that in addition to a change in materials there had been a change in shape, size, dimensions and in the relation of the parts to each other (Vol. II, p. 1065). Before the District Court came to define these differences, the District Court had noted that there was a change in material in addition to some adjustments of parts which when defined by the District Court were found to be changes "in the shape and in the size and in the dimension of the parts and differences in the relation to each other of the parts." Proceeding on the basis of this error of fact, the Court of Appeals then made an error of law in saying that it has been "uniformly held that substitution of material does not constitute invention." The true rule is, and always has been, that where a substantial contribution has been made there is invention even if the inventor did nothing more than make a substitution of materials (*Smith v. Good-year, supra*). Indeed, according to the District Court, that

was the only thing that was done in the invention in *Good-year v. Ray-O-Vac*, *supra*. (45 F. S. 927, 931.)

Thus the ruling of the Court of Appeals was based both upon an error of fact in which it differed from the District Court, and in an error of law in which it differs from this Court and many other Courts. The facts are that the patentees produced new combinations of old elements in which a feature was taken from here and a feature from there among six to ten of such old devices, whose features differed in material, in shape, in size, in dimensions and in the relation of the parts to each other, thereby making a great contribution to the solution of a problem which was adopted publicly and had commercial success.

How else can a new device differ from what went before except in materials, shapes, sizes, dimensions, and arrangements of parts, as the District Court found to be true here?

How else can an inventor make and disclose an invention which will be "beneficial to society" than to make and disclose an invention which is such a "great contribution" to the solution of a problem that it is adopted by the public and achieves the tribute of commercial success, a license and royalties from, and a duplication by the defendant?

What other proof can an inventor offer upon which his patent will be sustained than proof that his new combination differs from what went before in material, shape, size, dimensions and arrangement of parts, and that he has made a "great contribution" to the solution of a problem which has been adopted by the public, etc., all of which was found to be present in the instant cause?

Prior to the initiation of these current doctrinal trends, Courts almost universally sustained patents where the *prima facie* presumption of the validity of the patent due to its grant was supported by evidence of such facts as the District Court found to exist in the instant cause. The inventing public, the manufacturing public, and the patent

bar could depend upon these propositions. It was possible for inventors and manufacturers to proceed on that basis with their work and their investments. It was also possible for the patent bar to proceed.

We point these things out to convince this Court of the importance of doing something about this confusion, etc. to clear it up either by restoring the administration of the patent law to where it was and convince everybody that it has been so restored, or else if the Court thinks it should not be restored **to define a new basis** upon which the law is going to be administered so that the inventing and manufacturing public and the patent bar will know how to proceed.

Confusion in the Cause at Bar: Here, then, we have those skilled in chemistry, physics, combustion engineering and allied sciences who were selected by the Government because they were so skilled and qualified, and whom the law presumes did their duty, finding the disclosures in the patents in suit sufficient to teach those skilled in the art and finding the presence of invention under the rule that there was substantial innovation and beneficial contribution to society. The District Court affirms the substantial innovation and goes so far as to say that the beneficial contribution to society was a "**great** contribution" and, therefore, agrees with the Patent Office Examiner on the facts which come within the comprehension of such people as General Fitzhugh Lee.

It is not until we get into the forgotten field, that we find Judge Wilkin and Judge Allen differing from these scientific experts in the Patent Office.

Let us assume that Judge Wilkin and Judge Allen (who studied law while these experts were studying science) once knew as much about the sufficiency of disclosure of a scientific writing relating to chemistry, combustion engineering, etc. as the technical university graduates in the Patent Office. Intervening years would change that

situation in two ways: first, the Judges, like General Fitzhugh Lee, would forget much and, second, these sciences have changed materially since these Judges studied them.

It is an anomalous thing that in the administration of any branch of the law, the judiciary should agree with the scientific experts on the unscientific propositions, such as the substantial innovation and the great contribution to the benefit of the public, but should disagree with those scientists on the scientific questions of which those Judges would be prompt to say, we are certain, that they now know no more than General Fitzhugh Lee. (We do not ourselves say this of these Judges; we merely hazard the suggestion that they themselves would readily admit these propositions.)

This Court in Its Decision in *Sinclair & Carroll v. Interchemical Corporation* has, as we read the decision, made a ruling under which the patents in suit would have been sustained on the findings of the District Judge and, as we understand the decision, held that the "flash of genius" standard previously thought by many rightly or wrongly to have been set by this Court as controlling; this thought was controlling during the period in which the decisions below in the instant cause were handed down.

The "flash of genius" rule was, rightly or wrongly, read out of this Court's decision in *Cuno v. Automatic*,* and was accepted by a great many of the Courts below as the proper standard of invention, though it was subject to considerable bombardment from various sources. Be that as it may, it was controlling on the District Court in Cleveland and the Court of Appeals in the Sixth Circuit when the opinions in the instant cause were written and the issues decided. In *Sinclair & Carroll v. Interchemical*, handed down by this Court on May 21, 1945, the Court, as we read the opinion, challenged any notion that the criterion of invention was a "flash of genius" when this Court said

* 314 U. S. 84, 91.

that the Court "is not concerned with the quality of the inventor's mind, but with the quality of his product" and "whether or not those efforts" (of the patentee) "are of a special kind does not concern us." This can have no other meaning to us than that the "flash of genius" standard of invention current when the decisions below in the instant cause were rendered no longer dominates.

The proofs in the instant cause meet the requirements of invention stated by this Court in *Sinclair & Carroll v. Interchemical*. In the cited case this Court said:

"A long line of cases has held it to be an essential requirement for the validity of a patent that the subject-matter display 'invention,' 'more ingenuity * * * than the work of a mechanic skilled in the art.'" (Authorities cited.)

It would seem to be reasonable but not certain to conclude from this statement and these citations that the question of invention and mechanical skill is not to be dominated by the "flash of genius" theory. From the above quotation from this Court's opinion in the *Sinclair* case and from the citations, it seems to us reasonable to assume that a standard of invention is set which expects some substantial innovation and a substantial benefit to society. While the proofs in the instant cause do not meet the "flash of genius" test current at the time the Courts below decided the cause, they do meet the requirements set by this Court in the *Sinclair* case, as we show below.

In its opinion in the *Sinclair* case this Court said:

"This test is often difficult to apply; but its purpose is clear. Under this test, *some substantial innovation is necessary*,".

In the instant cause this test is met on the finding of the District Court that the innovation was so substantial that it differed from the prior art in every way in which one machine can differ from another when the District Judge found that the patented combination was built up from features taken from here and from there among from six

to ten prior art devices, and differed from any prior art device in the shape, size, dimensions and materials of the parts and in the differences in the relation of the parts to each other (see specific quotations from the Findings and the Opinion of the District Court on this subject, *supra*, p. 3).

The next test made by this Court in *Sinclair & Carroll v. Interchemical* was stated as follows:

“an innovation for which society is truly indebted to the efforts of the patentee.

* * * * *

“The primary purpose of our patent system is not reward of the individual but the advancement of the arts and sciences. Its inducement is directed to disclosure of advances in knowledge which will be beneficial to society;”

The District Court made Findings of Fact which report the presence of these tests when the District Court said (Vol. II, pp. 1063-1064):

“The evidence convinces the court that there was a problem, that the plaintiff made a great contribution to the solution of the problem, an improvement in oil burners that was accepted by the public and had commercial success. The defendant itself took a temporary license.”

(Vol. II, p. 1067):

“6. There was a problem and plaintiff made a contribution to the solution of the problem, an improvement in oil burners that was accepted by the public and had commercial success.”

Now, if what would appear to be the rule stated in *Sinclair & Carroll v. Interchemical* is to establish the presence of invention in the future instead of what the patent bar and the inventing public, rightly or wrongly, assumed was the “flash of genius” test, we suggest that this Court might think it well to apply the test in *Sinclair & Carroll v.*

Interchemical in enough causes to dispel the uncertainty that now exists which has resulted in the disastrous declines in inventions, patent applications and adjudications in favor of patents which have been shown in the tables and curves, *supra*. (p. 13.)

As the matter now stands it is manifest that if the "flash of genius" rule is no longer to be considered dominant, and it is still uncertain whether the old rule is restored, confusion is even greater than before since though it would seem reasonable that the "flash of genius" rule may no longer be the rule, it is not certain that the old rule is re-established and, if it is that the standard is the same, and if not what is the standard.

The cause at bar presents the questions whose decision by the Court would dispel this confusion.

The Advance in the Instant Cause Which is "Beneficial to Society":

(1) The objective proofs show, as the District Court found, that there was acceptance by the public, commercial success, and manufacture by the defendant under the patents in suit. The proofs show that there had been so many failures to produce a non-explosive wall flame oil furnace that the trade was so skeptical about the inventions of the patents in suit and the possibility of their success that the experts and the public would not accept or adopt the inventions until the abilities and virtues thereof were demonstrated to experts by tests, and even then the skepticism was so deep-rooted that the patentees were required to put up bonds to guarantee the continued successful performance. The evidence shows continued success which was limited by restrictions placed upon materials during the current wars. The record shows that the acceptance, the adoption, the commercial success, and the use by the defendant was due to the merits of the invention and to no other cause. The patentees did some little advertising

in the beginning, such as has been approved by this Court, for the purpose of announcing the contribution by the inventions and the solution of the problem (*Diamond v. Consolidated*, 220 U. S. 428). Later advertisements were necessary to meet the infringing and duplicating competition of the defendant.

(2) The subjective proofs show: Everyone is familiar with the restrictions placed upon the use of oil burners by the explosions in the burners and the dangers of such explosions. The inventions of the patents in suit eliminated such explosions or reduced them to a negligible minimum.

Cracking of the oil in the furnace was one of the objections of the old forms of furnaces, and this is eliminated in the inventions of the patents in suit.

Carbon deposits with their dangers were also eliminated.

These contributions were alone sufficient to meet the requirement of benefit to the public but, in addition, the inventions of the patents in suit increased the efficiency and the durability of the furnace and its ability to burn heavier and cheaper oils. It reduced the service charges, it increased the speed of heating and cooling, and the ability to maintain constant room temperatures.

Thus it not only made a contribution which was "beneficial to society," but it made a "*great* contribution" which was "beneficial to society"; it not only made an advance which was "beneficial to society," but it thus made a number of advances which were "beneficial to society."

Is the Test of Invention versus Mechanical Skill Any More Difficult to Apply Than Any Other Factual Question?: The following plan, based upon the facts, was generally used where reliance was had upon the facts rather than upon the "speculation of the arbitrator," to quote

Judge Altschuler in *Wahl v. Andis*, 66 Fed. (2) 164, 165 (C. C. A. 7):

The presence of mechanical skill was found when the evidence showed that a number of mechanics solved a problem simultaneously when that problem arose, as stated as follows:

"We proceed, therefore, to consider whether McElrath was entitled to a patent on the ground that he designed an important improvement in the machine used in the rayon industry which experienced persons in the industry had failed to discover, or whether, on the other hand, his design involved merely the exercise of mechanical skill. *This is a question of fact*; and since the evidence shows that *a number of persons in the industry in different parts of the country had no difficulty in effecting the desired change when the need for it became apparent*, the answer is that the change involved mechanical skill rather than invention." (Authorities cited.) (*McElrath v. Industrial Rayon*, 123 Fed. (2) 627, 629).

The presence of invention was found when the evidence showed the contrary, as stated as follows:

"It may be safely said that if those skilled in the mechanical arts are working in a given field *and have failed after repeated efforts to discover a certain new and useful improvement*, that he who first makes the discovery has done more than make the obvious improvement which would suggest itself to a mechanic skilled in the art, and is entitled to protection as an inventor." (*Expanded Metal v. Bradford*, 214 U. S. 366, 381.)

The difficulty has, it seems to us, been to induce whom Judge Altschuler called "the arbitrator" to rest his decision on the evidence on this fact question instead of resorting to "speculations."

In the cause at bar the record is replete with evidence proving a long need for the solution of the long existing problem, numerous prior efforts and failures by those

skilled in the art, including the experts of the defendant (Vol. I, pp. 211-212, 239-242; Exs. 47, 48, 53a-53-L, 54-56; Ex. 12-b, Vol. III, p. 18; Vol. I, pp. 94-95; 156 and 306).

Conclusion: Not since there was a patent law has there been such a general and destructive confusion and disagreement among different Courts. Confusion due to conflict in decisions in different Circuits on the same question, or between different Courts in the same Circuit on the same question, or due to other causes for which this Court ordinarily grants certiorari are trivial and harmless compared with that due to the causes which we point out and which are summarized as follows:

- (1) Has the standard of invention been changed?
- (2) If the standard has been changed, where is it now?
- (3) This Court should set such a standard as would insure the rules proposed by Congress of inducing people to make inventions which will benefit the public; the data and curves we have submitted prove that just the contrary is the effect of the standards currently followed by some of the Courts.

(1) If there has been no change in standard, ought not this Court to say so because the Courts below, who claim there has been a change of standard, base their decisions and rulings on the assumption that this Court has changed the standard; others claim there has been no change by this Court.

(2) If there has been a change of standard, nobody knows what is the present standard. Not only are the Courts in confusion and disagreement on this matter, but so is the Patent Bar and the inventing public. It is just as if a boat had been cut away from its anchorage and is floating down the stream without anybody knowing when or where it will be anchored. Indeed, it would seem that the boat is headed for destruction in the rapids, if it has

not already reached the rapids. Unless this Court does something about it, it is very plain from the curves and data which we have given that in not many years in the future this country will be in about the same status, as far as invention is concerned, as Mexico, Spain, India, and similar countries. Therefore, this Court ought to advise what is the new standard of invention if the old one has been changed.

(3) Even when the patent laws were construed and administered "liberally," the inducement was never more than sufficient to persuade inventors, to devote their time, money, and efforts to the making of those inventions which have been of such tremendous benefit to the public since the beginning of the last century. This is proven conclusively by the prompt decline in patent applications filed and the steady decline to 54% between 1930 and 1943 which began as soon as it became manifest that the former "liberal" administration was being withdrawn by raising the standards and by withdrawing other privileges which the patentee had enjoyed previously with respect to his patents and his inventions. Broadly speaking, therefore, the question which is before the American public, before this Court and well presented in the instant cause is—

Does the American public wish the inventor to continue to make inventions which benefited the public, including protection in war and building of industry in peace, as inventors did during these "liberal" interpretations of the patent law, or—Does the American public not wish that these inventions be continued? In other words, these curves and this data prove conclusively that inventors are very rapidly coming to the conclusion that under the patent laws as at present administered the inducement is insufficient to justify the expenditure of the inventor's time, money and effort in producing inventions which are beneficial to the public.

If further reason for this Court settling this question is needed, it is found in the Report of President Roosevelt's

Patent Planning Commission who have pointed out that industry in this country—and therefore employment by industry—is bottomed upon inventions which have been encouraged and made as a result of the patent system as it was administered prior to the time the boat was cut loose from its anchorage and, therefore, that the defense of this country in war is based upon weapons developed under the patent system as it existed before the current confusion arose.

If anyone challenges these conclusions of the Commission it is to be pointed out that our whole engineering professions, and this includes chemistry, etc., have been built up since the standards of invention were established by such men as Chief Justice Marshall at the beginning of the last century and which standards have been recently changed in a great many of the Courts, as we have pointed out. In other words, not only these useful inventions were developed under the former standards of invention, but it was during their tenure that these professions, along with the technical schools, technical journals, etc., were developed and, moreover, as President Roosevelt's Patent Planning Commission pointed out, they were developed only in the countries and only during the periods when there existed the standards of invention created by Chief Justice Marshall and his associates at the beginning of the last century.

Therefore, there could hardly be a more important question for this Court to consider and settle. Certainly there could not be, and never has been, such an important question in the patent law.

The instant cause, as we have pointed out, presents all of the requirements necessary to a settlement of these questions and issues.

Respectfully submitted,

F. O. RICHEY,

WM. A. STRAUCH,

Counsel for Petitioner.

